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see p. 6



1632 OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/973,473

DATE: 07/18/2002

TIME: 13:01:19

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TECH CENTER 1600/2900

Input Set : A:\#702147 v1 - 51401-20004.txt

Output Set: N:\CRF3\07182002\I973473.raw

3 <110> APPLICANT: SONENBERG, Nahum  
 4 TREMBLAY, Michel  
 5 TSUKIAYAMA-KOHARA, KYOKO  
 7 <120> TITLE OF INVENTION: NON-HUMAN TRANSGENIC ANIMAL WHOSE GERM CELLS AND  
 8 SOMATIC CELLS CONTAIN A KNOCKOUT MUTATION IN DNA  
 9 ENCODING 4E-BP1  
 11 <130> FILE REFERENCE: 514012000400  
 13 <140> CURRENT APPLICATION NUMBER: 09/973,473  
 C--> 14 <141> CURRENT FILING DATE: 2001-10-03  
 16 <150> PRIOR APPLICATION NUMBER: PCT/CA00/00388  
 17 <151> PRIOR FILING DATE: 2000-04-07  
 19 <150> PRIOR APPLICATION NUMBER: 60/128,559  
 20 <151> PRIOR FILING DATE: 1999-04-09  
 22 <150> PRIOR APPLICATION NUMBER: 60/179,743  
 23 <151> PRIOR FILING DATE: 2000-02-02  
 25 <160> NUMBER OF SEQ ID NOS: 27  
 27 <170> SOFTWARE: PatentIn Ver. 2.1  
 29 <210> SEQ ID NO: 1  
 30 <211> LENGTH: 16  
 31 <212> TYPE: DNA  
 32 <213> ORGANISM: Artificial Sequence  
 34 <220> FEATURE:  
 35 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic  
 36 oligonucleotide  
 38 <400> SEQUENCE: 1  
 39 tgcaggagac atgtcg 16  
 42 <210> SEQ ID NO: 2  
 43 <211> LENGTH: 16  
 44 <212> TYPE: DNA  
 45 <213> ORGANISM: Artificial Sequence  
 47 <220> FEATURE:  
 48 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic  
 49 oligonucleotide  
 51 <400> SEQUENCE: 2  
 52 acagtttgag atggac 16  
 55 <210> SEQ ID NO: 3  
 56 <211> LENGTH: 22  
 57 <212> TYPE: DNA  
 58 <213> ORGANISM: Artificial Sequence  
 60 <220> FEATURE:  
 61 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic  
 62 oligonucleotide  
 64 <400> SEQUENCE: 3

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65 gggtgagttt caccagtttt ga                                22
68 <210> SEQ ID NO: 4
69 <211> LENGTH: 22
70 <212> TYPE: DNA
71 <213> ORGANISM: Artificial Sequence
73 <220> FEATURE:
74 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
75     oligonucleotide
77 <400> SEQUENCE: 4
78 ccactcatcg cagtactgtt gt                                22
81 <210> SEQ ID NO: 5
82 <211> LENGTH: 24
83 <212> TYPE: DNA
84 <213> ORGANISM: Artificial Sequence
86 <220> FEATURE:
87 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
88     oligonucleotide
90 <400> SEQUENCE: 5
91 caatatggac aacttcttcg cccc                                24
94 <210> SEQ ID NO: 6
95 <211> LENGTH: 16
96 <212> TYPE: PRT
97 <213> ORGANISM: Homo sapiens
99 <400> SEQUENCE: 6
100 Arg Ile Ile Tyr Asp Arg Lys Phe Leu Met Glu Cys Arg Asn Ser Pro
101   1           5              10              15
104 <210> SEQ ID NO: 7
105 <211> LENGTH: 16
106 <212> TYPE: PRT
107 <213> ORGANISM: Homo sapiens
109 <400> SEQUENCE: 7
110 Arg Ile Ile Tyr Asp Arg Lys Phe Leu Leu Asp Arg Arg Asn Ser Pro
111   1           5              10              15
114 <210> SEQ ID NO: 8
115 <211> LENGTH: 16
116 <212> TYPE: PRT
117 <213> ORGANISM: Homo sapiens
119 <400> SEQUENCE: 8
120 Arg Ile Ile Tyr Asp Arg Lys Phe Leu Leu Glu Cys Lys Asn Ser Pro
121   1           5              10              15
124 <210> SEQ ID NO: 9
125 <211> LENGTH: 16
126 <212> TYPE: PRT
127 <213> ORGANISM: Homo sapiens
129 <400> SEQUENCE: 9
130 Lys Lys Arg Tyr Asp Arg Glu Phe Leu Leu Gly Phe Gln Phe Ile Phe
131   1           5              10              15
134 <210> SEQ ID NO: 10
135 <211> LENGTH: 16

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```

136 <212> TYPE: PRT
137 <213> ORGANISM: Homo sapiens
139 <400> SEQUENCE: 10
140 Lys Lys Gln Tyr Asp Arg Glu Phe Leu Leu Asp Phe Gln Phe Met Pro
141   1               5               10               15
144 <210> SEQ ID NO: 11
145 <211> LENGTH: 16
146 <212> TYPE: PRT
147 <213> ORGANISM: Danio rerio
149 <400> SEQUENCE: 11
150 Lys Lys Arg Tyr Asp Arg Glu Phe Leu Leu Gly Phe Gln Phe Ile Ser
151   1               5               10               15
154 <210> SEQ ID NO: 12
155 <211> LENGTH: 16
156 <212> TYPE: PRT
157 <213> ORGANISM: Drosophila melanogaster
159 <400> SEQUENCE: 12
160 Lys Lys Gln Tyr Asp Arg Glu Gln Leu Leu Gln Leu Arg Glu Val Lys
161   1               5               10               15
164 <210> SEQ ID NO: 13
165 <211> LENGTH: 16
166 <212> TYPE: PRT
167 <213> ORGANISM: wheat germ
169 <400> SEQUENCE: 13
170 Arg Val Arg Tyr Ser Arg Asp Gln Leu Leu Asp Leu Arg Lys Ile Thr
171   1               5               10               15
174 <210> SEQ ID NO: 14
175 <211> LENGTH: 16
176 <212> TYPE: PRT
177 <213> ORGANISM: Arabidopsis thaliana
179 <400> SEQUENCE: 14
180 Arg Val Lys Tyr Thr Arg Glu Gln Leu Leu Glu Leu Lys Glu Val Ile
181   1               5               10               15
184 <210> SEQ ID NO: 15
185 <211> LENGTH: 16
186 <212> TYPE: PRT
187 <213> ORGANISM: Halocynthia roretzi
189 <400> SEQUENCE: 15
190 Arg Ile Ile Tyr Asp Arg Leu Phe Leu Leu Lys Cys Arg Asp Ser Pro
191   1               5               10               15
194 <210> SEQ ID NO: 16
195 <211> LENGTH: 16
196 <212> TYPE: PRT
197 <213> ORGANISM: Bombyx mori
199 <400> SEQUENCE: 16
200 Arg Ile Val Tyr Glu Arg Ser Phe Met Leu Ser Leu Arg Gln Ser Pro
201   1               5               10               15
204 <210> SEQ ID NO: 17
205 <211> LENGTH: 16

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```

206 <212> TYPE: PRT
207 <213> ORGANISM: Schistosoma mansoni
209 <400> SEQUENCE: 17
210 Arg Ile Ile Tyr Glu Arg Asp Phe Ile Leu Ser Cys Arg Asn Ser Pro
211   1           5           10           15
214 <210> SEQ ID NO: 18
215 <211> LENGTH: 16
216 <212> TYPE: PRT
217 <213> ORGANISM: Dictyostelium discoideum
219 <400> SEQUENCE: 18
220 Lys Ile Val Tyr Asp Arg Asn Ala Leu Leu Gln Tyr Arg Asn Ser Pro
221   1           5           10           15
224 <210> SEQ ID NO: 19
225 <211> LENGTH: 16
226 <212> TYPE: PRT
227 <213> ORGANISM: Saccharomyces cerevisiae
229 <400> SEQUENCE: 19
230 Lys Tyr Thr Tyr Gly Pro Thr Phe Leu Leu Gln Phe Lys Asp Lys Leu
231   1           5           10           15
234 <210> SEQ ID NO: 20
235 <211> LENGTH: 16
236 <212> TYPE: PRT
237 <213> ORGANISM: Saccharomyces cerevisiae
239 <400> SEQUENCE: 20
240 Met Ile Lys Tyr Thr Ile Asp Glu Leu Phe Gln Leu Lys Pro Ser Leu
241   1           5           10           15
244 <210> SEQ ID NO: 21
245 <211> LENGTH: 7
246 <212> TYPE: PRT
247 <213> ORGANISM: Artificial Sequence
249 <220> FEATURE:
250 <221> NAME/KEY: VARIANT
251 <222> LOCATION: (2)..(5)
252 <223> OTHER INFORMATION: x = any amino acid
254 <220> FEATURE:
255 <221> NAME/KEY: VARIANT
256 <222> LOCATION: (7)
257 <223> OTHER INFORMATION: x = hydrophobic amino acid
259 <400> SEQUENCE: 21
W--> 260 Tyr Xaa Xaa Xaa Xaa Leu Xaa
261   1           5
264 <210> SEQ ID NO: 22
265 <211> LENGTH: 11
266 <212> TYPE: PRT
267 <213> ORGANISM: Artificial Sequence
269 <220> FEATURE:
270 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
271     peptide
273 <220> FEATURE:

```

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```

274 <221> NAME/KEY: VARIANT
275 <222> LOCATION: (1)
276 <223> OTHER INFORMATION: x = positively charged amino acid
278 <220> FEATURE:
279 <221> NAME/KEY: VARIANT
280 <222> LOCATION: (7)
281 <223> OTHER INFORMATION: x = positively charged amino acid
283 <220> FEATURE:
284 <221> NAME/KEY: VARIANT
285 <222> LOCATION: (2)
286 <223> OTHER INFORMATION: x = hydrophobic amino acid
288 <220> FEATURE:
289 <221> NAME/KEY: VARIANT
290 <222> LOCATION: (10)..(11)
291 <223> OTHER INFORMATION: x = hydrophobic amino acid
293 <220> FEATURE:
294 <221> NAME/KEY: VARIANT
295 <222> LOCATION: (3)
296 <223> OTHER INFORMATION: x = any amino acid
298 <220> FEATURE:
299 <221> NAME/KEY: VARIANT
300 <222> LOCATION: (4)
301 <223> OTHER INFORMATION: x = any amino acid
303 <220> FEATURE:
304 <221> NAME/KEY: VARIANT
305 <222> LOCATION: (6)
306 <223> OTHER INFORMATION: x = any amino acid
308 <220> FEATURE:
309 <221> NAME/KEY: VARIANT
310 <222> LOCATION: (8)
311 <223> OTHER INFORMATION: x = any amino acid
313 <400> SEQUENCE: 22
W--> 314 Xaa Xaa Xaa Xaa Tyr Xaa Xaa Xaa Phe Xaa Xaa
      315   1           5           10
318 <210> SEQ ID NO: 23
319 <211> LENGTH: 16
320 <212> TYPE: PRT
321 <213> ORGANISM: Artificial Sequence
323 <220> FEATURE:
324 <223> OTHER INFORMATION: Description of Artificial Sequence: synthetic
325     peptide
327 <220> FEATURE:
328 <221> NAME/KEY: VARIANT
329 <222> LOCATION: (1)
330 <223> OTHER INFORMATION: x = positively charged amino acid
332 <220> FEATURE:
333 <221> NAME/KEY: VARIANT
334 <222> LOCATION: (6)
335 <223> OTHER INFORMATION: x = positively charged amino acid

```

RAW SEQUENCE LISTING ERROR SUMMARY  
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Input Set : A:\#702147 v1 - 51401-20004.txt  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:21; Xaa Pos. 2,3,4,5,7  
Seq#:22; Xaa Pos. 1,2,3,4,6,7,8,10,11  
Seq#:23; Xaa Pos. 1,2,3,5,6,7,8,9,10,11,12,14  
Seq#:24; Xaa Pos. 1,2,3,5,6,7,10,11,12,14  
Seq#:25; Xaa Pos. 1,2,3,5,6,7,8,10,11,12,14  
Seq#:26; Xaa Pos. 1,2,3,5,6,7,10,11,12,13,14,15,16  
Seq#:27; Xaa Pos. 1,2,3,5,6,7,8,10,11,12,13,14,15,16

## VERIFICATION SUMMARY

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Input Set : A:\#702147 v1 - 51401-20004.txt

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L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:260 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0  
L:314 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0  
L:373 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0  
L:427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0  
L:481 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0  
L:535 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0  
L:589 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0